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APPENDIX B

INSTITUTIONAL CONTROL ALTERNATIVES

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APPENDIX B

INSTITUTIONAL CONTROL ALTERNATIVES

B.1 INTRODUCTION

B.1.1 Institutional Controls (ICs) are measures undertaken to limit public exposure to hazardous materials. These preventive measures may be voluntary in nature or may be legally enforceable requirements. The ICs may consist of educational awareness programs, legal restrictions on land use, and physical access controls. The ICs recommended in this report are an important component of the overall risk management system for Camp Bonneville upon property transfer to Clark County. Clark County will have authority and responsibility for implementing and monitoring the ICs. The ICs proposed for application at Camp Bonneville were developed in response to Washington State Model Toxics Control Act requirements, listed in WAC 173-340-440. These ICs also address the concerns expressed in the public participation meetings and Camp Bonneville Reuse Planning process. These priority concerns were listed as follows:

- Public Safety
- Liability
- Property Values
- Land Use

B.1.2 The Camp Bonneville IC Plan addresses site-wide concerns as well as site-specific camp reuse plans. The proposed controls correspond to the site-wide and site-specific elements of the Camp Bonneville Reuse Plan (1998). The Reuse Plan includes an overall recreation focus with site-specific eco-preservation programs, active and passive recreation, education uses, stakeholder use of the park, maintenance and operations, and timber harvestings functions to generate income for economic development and self sufficiency of the park. This recommended program of institutional controls is designed to complement both specific engineering controls and ordnance removal actions. ICs are a key element of the overall risk management program to protect future visitors, contractors and employees at Camp Bonneville.

B.1.3 The importance of effective implementation of ICs is magnified by the population growth in Clark County. In the 2000 Census the population was 345,238, and it was ranked as the fastest growing county in the State of Washington. The County population in 2002, according to the Washington State Office of Financial Management, was 363,400. Clark County is expected to be the primary source of visitors to the future Camp Bonneville regional park. The adjacent Portland, Oregon area has a “metro” development plan that is guided by Urban Growth Boundaries. These Urban Growth

Boundaries inhibit rezoning and land development beyond established boundaries. Clark County is excluded from the Urban Growth Boundary since it is located within the jurisdiction of the State of Washington. As such it is subject to less restrictive growth management systems. Clark County is therefore an outlet for regional population growth and development in the metro Portland area. The ICs presented here anticipate that the proposed regional park will be intensively used since Clark County is the core of suburban growth and because the future regional park is the largest new recreation facility in the metro Portland area.

B.2 INSTITUTIONAL CONTROL REVIEW

B.2.1 Parsons has reviewed the Camp Bonneville Reuse Plan (1998) as it relates to the use of ICs as a means of risk management in coordination with Clark County and the City of Vancouver. In the initial process of review of the Camp Bonneville Reuse Plan for the proposed regional park, site-specific areas of concern were identified: 1) two proposed trails in locations that have not been investigated for the potential presence of ordnance; 2) a proposed camping site on a grenade testing range. The ICs will provide comprehensive assurances that safety planning considerations are incorporated into an effective adaptive reuse of Camp Bonneville.

B.2.2 In addition to meeting the legal and engineering requirements specified in the proposed ordnance removal actions, ICs are recommended to further reduce risk of public interaction with residual ordnance items that may remain at Camp Bonneville. The RI/FS report recommendations incorporate both residual ordnance removal actions and ICs together to facilitate the safe and comprehensive reuse of Camp Bonneville. ICs are proposed to be both site-wide and site-specific in nature. The recommendation of ICs included both implementation of specific IC measures and a collateral monitoring system designed to evaluate and regularly update the effectiveness of the ICs. The RI/FA – RAU3 also recommends responsibilities for implementation of ICs to the 10 specific site types and locations, as well as site-wide ICs for protection of human health and the environment.

B.3 SITE-WIDE ICs

B.3.1 Covenants

B.3.1.1 In large measure, the ICs proposed for Clark County prescribe broad legal land use of “restrictive covenants” on the Camp Bonneville acreage. The purpose of these restrictive covenants are to safeguard future park users, park operations, contractors for new construction, maintenance staff, utilities or infrastructure construction staff, timbering contractors, and for accurate monitoring purposes.

B.3.3.2 As noted earlier, Camp Bonneville is located within rapidly growing Clark County in the Portland Metropolitan Region. The County has very strong comprehensive planning regulations. The current land use designation is an institutional designation illustrated as Tier 1 Forest on the land use map. Future updates of the County plan will reflect the site as recreation and park land uses. Since the Camp will remain in

government ownership internal, land uses will remain institutional. Of more concern is the surrounding land use. Any increase of land uses surrounding the future park to higher development intensities will result in increased access to the area. It is recommended that the restrictive covenants on the site be amended to the County comprehensive plan and to the regional plan in order to discourage an increase in land use density near the park. The surrounding area is currently used for agriculture and large lot residentially zoned property. This is consistent with the mostly forested nature of Camp Bonneville.

B.3.2 Financial Assurances

The site-wide ICs includes a financial mechanism for funding of appropriate UXO-trained staff (UXO Tech 1) for an established period of time to ensure the transition to long-term effectiveness of engineered and ICs. The UXO-trained staff will provide maintenance for the park, continuity on maintenance of the ICs, and monitor effectiveness of the controls to the intent of the risk management program. Financial assurances will address changing conditions in the park, particularly in regards to increased visitation for a recommended 5-year period.

B.3.3 Education Outreach

Camp Bonneville has an 85 year history that encompasses American Military Heritage from WW I, to the Cold War and through Desert Storm. The education outreach program recommends audio, visual, written, and classroom outreach programs, both regionally and on site. The site-wide history lesson for visitors at Camp Bonneville should include tours, preservation lessons, environmental education, courses on 1950s Cold War threats illustrated by the Soviet Village, training bunkers, and training strategies. To facilitate an understanding of the history and the risk program, the ICs recommend site-wide retention of “signage” naming or designating roads, areas, districts and training areas for their original purposes. The signage should be amended with current recreational purposes and locations. The education process will include an expanded website; new video prepared for public television, cable television and for visitors; a school outreach program; the interpretive and retreat educational centers; a historical museum and exhibit on the Camp Bonneville site; and written materials to correspond to the identification of ordnance, safety and heritage protocols.

B.3.4 Regional and Clark County Comprehensive Plan

Covenants adopted by Clark County that restrict development on the former Camp Bonneville to a site plan for preservation, economic, recreational and educational uses will be amended to the Regional and Clark County Comprehensive Plans. This institutional control will assure that developers and property owners representing surrounding land uses, re-zonings and any new development in the fast growing area will be made aware officially of the history, safety plans, and associated issues related to development near Camp Bonneville.

B.4 SITE-SPECIFIC ICs

B.4.1 Access Control

B.4.1 The Camp Bonneville Reuse Plan includes key parcels of land that are designated for complete access restrictions. The recommendation for these restricted sites is to landscape gateways, signage, trails and roadway entrances with fencing and native prickly shrubbery that prevents easy access. All new construction site plans at Camp Bonneville will call for defensible space landscape measures on restricted areas. OE Source site types will be individually evaluated so that appropriate site-specific ICs can be customized for local applicability.

B.4.2 The proposed ICs at Camp Bonneville will utilize comprehensive access control and behavior modification through public education. However, it is also understood that public education may incite a reverse reaction from a small segment of the population that may view dangerous actions as an adventure. This possibility is accepted and it is understood that there will always be some portion of the populace who refuse to heed warnings or follow directions. Access controls are recommended for the Central Impact Area since this was the target site for most all of the ordnance activities. The strategy is to remove the human element from the chain of events that could lead to an accident. The controls recommended below summarize the proposed techniques for Camp Bonneville.

B.4.2 Signage and Fencing

B.4.2.1 Present a comprehensive sign posting system that entry is prohibited, that activities within the property are restricted in some manner, or that although the area is accessible, there is a history of a certain type of ordnance. Present this signage with dual information: historic and current designations, i.e., Artillery Range Road amended with “Jogging Trail 8 and College Center,” or Mortar Range Road amended with “Lacamas Creek Fishing.” The use of this signage system is based upon the safety, and institutional education. The link between *not trespassing/care in usage of Camp Bonneville* and *explosive safety* should be reinforced.

B.4.2.2 Fencing is a desired element of the ICs; and a comprehensive landscape plan with a fencing system is recommended. A fencing system is recommended for Camp Bonneville, both as a landscape feature for beneficial economic purposes and also as an enforcement tool to deny access to the public to areas designated as off limit. Fencing and gates will reinforce the link between appropriate access points, not trespassing and explosive safety. Because of the urbanization of Clark County there is greater importance to enforce trespass strictures on the large site and more effectiveness if fencing is present.

B.4.2.3 Signs and fencing will be extremely effective ICs on this site. They are valid for use in reducing the risk of exposure to potential accidents involving ordnance through personal restraint and identification of risks. The posting of signs along the perimeter and within the interior of the property provides “on the spot” warnings of the potential hazards of physical contact with residual ordnance items.

B.4.2.4 Fencing and signage are presently used at the Entrance to Camp Bonneville and on the property lines adjacent to single family developments that are 5 miles from the Vancouver City Limits at the southwest corner of the site. The wildlife management area does not have access and entry restrictions and may be accessed randomly by hunters. Signs and fencing should be concentrated near private property owners mostly in the west and southwest areas.

B.4.2.5 The installation of fencing and signage to limit access is recommended. The implementation of the Reuse Plan will include development of a landscape plan. Prior to opening the regional park for public access, a fencing and signage system should be developed and implemented. A comprehensive fencing and signage plan is recommended and can be developed at nominal cost with advice of Clark County and City of Vancouver Department of Parks and Recreation. The fencing and signage should be consistent with City and/or County Park and Recreation design guidelines.

B.5 EDUCATION & AWARENESS PROGRAMS

B.5.1 The Clark County Government will need to modify the behavior of the park visitors and general population through public education by utilizing County stakeholder agencies that have interest in using the site. In addition, the County should amend its comprehensive plan, land use and zoning maps to reflect the restrictive covenants on Camp Bonneville property.

B.5.2 Raising public education for the potential hazards that exist within the former Camp Bonneville should be facilitated with ICs as listed below.

- Notice – Notifications during timbering, utility and infrastructure construction, and permitting;
- General Printed Media - Including brochures and news articles;
- Visual and Audio Media - Including videotapes and announcements;
- Education Classes - Including ordnance identification, safety presentations to various audiences, and preparation of packages for administrators and public officials;
- Exhibits/displays;
- Internet Website; and
- Ad Hoc Committee.

B.5.3 Potential hazards must be considered in the design and use of any site improvements or activities. Notices should be placed on Camp Bonneville property to address visitation, maintenance, operations and construction. Clark County notifications should be sent through the permitting of utility connections, infrastructure construction, surveying, timbering, and related physical land disturbance tasks. Standard application forms and brochures that explain the procedures involved in the construction notification

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and building permit approval processes should be updated to reflect training and circumstances dealing with ordnance at Camp Bonneville.

B.5.4 The cost for the initial brochures on Camp Bonneville ordinance identification, Maps and Reuse Plan information documents would cost approximately \$5,000. A master copy can be created electronically for reproduction purposes and revisions as needed, and included as a part of the existing City of Vancouver and Clark County building permit information packets.

B.6 LAND USE CONTROLS

B.6.1 The inclusion of restrictive covenants and site plan requirements for Camp Bonneville in the update of the County and Regional Comprehensive Plan will discourage nearby development intensity on a voluntary basis. Restrictive covenants on the land uses of Camp Bonneville will be detailed in an official site plan and adopted by Clark County for enforcement and effectiveness of monitoring purpose. This approach will be effective because it focuses on traditional market and real estate pricing.

B.6.2 The standard permit application process of the City of Vancouver and Clark County should be amended to include information about the possibility of ordnance hazards, and specific Camp Bonneville site plan information and restrictive covenants. The cost of updating geographic information systems to include the planning and to create the capability of identifying these parcels could be provided by Clark County. The cost to document all properties and to input this information into the County system, and train County employees to call up and provide the information is estimated to be between approximately \$2,500 and \$3,000.

B.7 PRINTED MEDIA AWARENESS PROGRAM

B.7.1 Ordnance education, acknowledgement of the risk involved, and reinforcement of the message are key in minimizing the hazards of ordnance. The avenue recommended to facilitate this education and understanding is through printed media in the form of brochures, fact sheets, newspaper articles, and other information packages. The opportunity to disseminate information through the printed media is readily available and can be easily facilitated because of the numerous media outlets in Metropolitan Portland. Through the use of printed media, property owners and residents from within the County and the region can be informed about the existence of ordnance hazards within the former Camp Bonneville.

B.7.2 Updated brochures and fact sheets describing the important history of the Camp, its new future as a large regional park, and explanation of ordnance hazards can be produced. Text and graphics can be used to describe how to identify ordnance, provide warnings to avoid physical contact in any way, provide instructions for dealing with ordnance if encountered, and how to report ordnance sightings. These printed materials could be produced by Clark County and should also include local sponsorship and ownership. They can be distributed as follows:

- Enclosed as flyer in local newspapers announcing the opening of the park
- Provided through schools to all students in the region
- Provided to stakeholders and community groups
- Provided as part of the City and County Park and Recreation Program

B.7.3 Newspaper articles and interviews provide another means of informing the public about the changeover from army use to County parkland. The articles can discuss the site as an environmental sanctuary as well as the potential presence of ordnance. News articles can continue to be supplied as press releases from Clark County. Interviews with Clark County representatives, local residents, and other institutions can be included. Continued regular coverage should result in more tourism, visitor use and better information and understanding of the actual existence of and hazards of ordnance. Interviews with people who actually were involved in training at the Camp would add interest to these articles.

B.7.4 County Commissioners and City of Vancouver elected officials should be provided with more detailed current information on the risk management plan, the RI/FS Report the ICs recommended and the extent of ordnance hazards. An information package, including maps defining primary areas of concern, would be valuable for the public officials. It can also include a brief history of the site, areas of greatest concern, types and potential danger of the ordnance discovered, and other relevant organizations' contact information.

B.7.5 Regular updates to local elected officials are effective means of public outreach. Local elected officials are in regular contact with constituents and the media and are the logical broker of information regarding the new park and the Reuse Plan. The Army could provide a fact sheet about BRAC that can be customized for Camp Bonneville. Press releases should be prepared by Clark County and presented to the local newspapers. When a new fact sheet is prepared to describe the findings and recommendations of the BRAC and the proposed plans for creation of the Regional Park as well as removal tasks and ICs.

B.7.6 The estimated cost to produce an original professional quality, multi-color one page fact sheet on an 8 ½ x 11 format suitable as a mailer or handout is approximately \$5,000.00. The fact sheet would be prepared to include primarily graphics with minimal text description to provide information about the presence of ordnance, plans for removal and ICs; plus information on the identification, handling, and reporting of ordnance. The cost to print and distribute the fact sheet will depend on the number of copies to be distributed. Assuming that 7,500 fact sheets are to be printed and mailed (at a cost of \$2.00 each), and 5,000 fact sheets are to be printed and distributed by local institutions (\$1.50 each). The total cost for design and preparation of the brochure (printing 12,500 copies and mailing 7,500 copies) will be \$27,500.00. Revision of the fact sheet is anticipated to be done only once. Fact sheets or brochures should be utilized together with abstracts of additional information on ordnance cleanup, mapping, and proposed

removal and ICs. The production cost for these information packages is already included in the production cost of the fact sheets above.

B.8 VISUAL AND AUDIO MEDIA AWARENESS PROGRAM

B.8.1 Powerpoint presentations, audio and visual media (such as videos, segments on local television stations, and radio news and talk shows) should be prepared on an on going basis to inform and educate the public. Professional quality videos that contain similar information as described in the printed materials can be produced at a cost estimate of \$1,000 per minute. The videos can be produced privately by the City, by the County, or through cable television franchise agreements and could include interviews with local citizens, sponsorship, and ownership. Videotapes can be produced for use as part of the classroom education as discussed in a later section. Copies should also be provided to local libraries.

B.8.2 Public television station should provide excellent local access. Public Service Announcements should be requested on how to identify and deal with ordnance. Local contact information on ordnance handling and emergencies can be provided. It is suggested that the television programs include interviews with USACE personnel, local residents, and others who have knowledge of the history of the former Camp.

B.8.3 Local radio stations should be invited to participate in events, such as the grand opening of the regional park, and to provide public service announcements for school programs and programs of stakeholder groups that fit the demographics of the individual stations. Talk shows or news reports are both possible formats for the radio programs.

B.8.4 The provision of information using visual and radio media is an effective method of modifying behavior and educating the public. This is currently a technique used by the Army. Periodic updating of the videotapes is recommended to ensure the accuracy and timeliness of the information presented. Cable and radio stations would readily agree to assist in distribution of the information and provide free air time for public service announcements.

B.8.5 The estimated cost to produce a 5- to 7-minute videotape for distribution to the community is approximately \$5,000 to \$8,000. Assuming 100 copies of videotapes at \$5 each (including the cost of the videotape, dubbing, and postage) the cost would be approximately \$500. Add to the cost a 30 second public service announcements at \$1000 and the estimated total cost to implement a media program would be \$6,500 to \$9,500.

B.9 CLASSROOM EDUCATION PROGRAMS

B.9.1 The Camp Bonneville Reuse Plan includes the provision for a college environmental education center. This center should be the location for classroom education programs. In addition, the video and brochures should be the core of a public schools outreach program targeted to Clark County Public Schools. The public needs to understand the nature of ordnance hazards and be able to properly identify and avoid

ordnance if encountered. A properly educated public is more likely to make correct decisions related to the safe and proper precautions of found ordnance. Classroom education can be offered in two major categories:

- Ordnance Identification; and
- Ordnance Safety.

B.9.2 Because access to different parts of the site cannot be fully controlled, it is necessary to have public training in ordnance identification. The basic message should be to not touch anything that looks like ordnance, shrapnel, or any other unidentified material. Ordnance identification classes may be conducted through assistance from the County Public Schools Systems, all private schools, and universities. The City of Vancouver – Clark County Parks and Recreation Department should be the responsible agency.

B.9.3 The affected public should be educated about the potential dangers associated with ordnance and should understand the safety procedures to follow if they encounter any suspected ordnance item. Safety presentations should be made as a part of the ordnance identification classes. Providing education through the classroom is critical to modify children's behavior. Ordnance identification classes should be conducted on a regular basis and ordnance safety should be incorporated as a regular part of the classes held at Camp Bonneville. All visitors to the regional park should be given a brochure illustrating ordnance hazards.

B.9.4 Providing classroom education should be easily implementable. With team work between the City of Vancouver – Clark County Parks and Recreation and with the US Army providing the funding and the educational information package, local institutions would agree to participate and support the program. The USACE can provide experts to conduct ordnance identification and safety lectures. The ordnance expert presentations to local schools would be co-sponsored by the City, County or the school systems. The cost for travel and presentation materials (other than the videos) for an employee to make presentations and provide local training to local schools for one week is \$500.00.

B.10 EXHIBITS/DISPLAYS

Placing historic Camp Bonneville exhibits/displays in museums or other areas where the public will be exposed to educational information is another method of generating and preserving general awareness and educating the public on the possible risk associated with the ordnance. An exhibit should be established at Camp Bonneville as part of the college center. The cost of producing, maintaining, and updating an exhibit will vary depending upon the scope. A replica of Camp Bonneville is recommended, complete with archival records and photos of the history of the site over the past 85 years. The Army could provide decommissioned examples of the weapons and ordnance used at Camp Bonneville.

B.11 INTERNET WEBSITE PROGRAM

B.11.1 The expansion of the City of Vancouver – Clarke County web pages on the Internet should be used in educating the public about Camp Bonneville and the presence of ordnance on the site. The web page could be designed to include the history of the camp, a background on ordnance finds and cleanup, and ordnance identification and procedures for dealing with it. The web pages would be very effective in terms of presenting substantial and updated information about ordnance hazards on the site. Creation and maintenance of the website can be sponsored by Clark County. Information to be included in the website will come from the USACE studies and other sources.

B.11.2 Existing website masters or County staff may be able to design, create and maintain a Camp Bonneville website. However, the cost to design a new website varies from \$50.00 to \$150 per hour. Assuming that the design would require 100 hours at \$100.00 per hour (including review, revisions, and placing the site on the web), the total cost could be \$10,000.00. The website enhancements can be prepared internally or externally. Any site will provide links to other important government agencies relevant to ordnance handling and identification.

B.12 AD HOC COMMITTEE AWARENESS PROGRAM

B.12.1 A new Clark County/City of Vancouver Parks and Recreation Committee should be enabled with a revised scope of service for community awareness. The original Committee was comprised of community leaders and a representative from the USACE and served as a mechanism for implementing ideas for the Reuse Plan. An ad hoc committee should serve as the primary proponent for public education of the ordnance issues. It will work to ensure the successful implementation of each of the recommended institutional control education programs. The committee will be responsible for analyzing the effectiveness of the different programs on an annual basis and recommending changes as necessary to bring the message to the largest sector of the public.

B.12.2 An ad hoc committee would be very effective in providing a proponent for public education. This group would provide a direct and flexible administration over information dissemination programs. With the committee's annual evaluation, more effective alternatives could be enhanced and less effective ones could be discontinued. This type of committee is most effective for ensuring the implementation of institutional control programs.

B.12.3 The City of Vancouver – Clark County Parks and Recreation will oversee the formation of the ad hoc committee. Community leaders, veterans, and agency representatives will be contacted and invited to join. Joining and serving within the ad hoc committee will be by appointment and voluntary except for the Tech 1 recommended for staff to Camp Bonneville. This person will act as staff to the ad hoc committee. The members will not be paid for their time. To implement ad hoc committees as a mechanism for information dissemination will cost approximately \$2,000 for the first year and \$2,000 for each subsequent year. The costs would include retaining services of

a stenographer to record meeting minutes, overhead administrative costs, and other miscellaneous expenses. To create an ad hoc committee, the City of Vancouver – Clark County Parks and Recreation, Clark County Commission and USACE must jointly meet and select community leaders to join the committee.

B.13 CONCLUSIONS

The goal of the Institutional Controls Program is to assure the maximum safety to citizens. It is technically and financially impossible to provide 100% clean up of unexploded ordnance at Camp Bonneville due to the 85 year history of ordnance use. However, ICs will demonstrably reduce risks as a protective remedy. The City of Vancouver Clark County Parks and Recreation Department will need to establish an ICs monitoring or surveying system for user suggestions, for a quick understanding of changing conditions, to identify problems and to identify shifts in the age of visitors (their capacity to relate or understand the written and audio visual information). An annual report card on ICs should be issued to the County Commission for policy and procedure revisions in all aspects of the program (education, legal, physical restrictions). Ongoing monitoring, quantification of input, and updated policy and park planning will enable Clark County to protect its citizens while enjoying access to one of the largest new urban parks in America.